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a pointing mechanism mounted on said first fixed position node comprising a transmitter configured to transmit an optical signal, said pointing mechanism configured to automatically adjust both the azimuth and elevation angles of said transmitter so that said transmitter is pointed directly at said receiver and said optical signal is transmitted in a direct path from said transmitter to said receiver; and

a second receiver mounted on said first fixed position node and configured to receive an adjustment signal, said pointing mechanism further configured to automatically adjust said azimuth and elevation angles of said transmitter according to said adjustment signal received by said second receiver.

3. The system of Claim 2, further comprising:

a retro reflector mountable on said second fixed position node configured to receive said optical signal transmitted from said transmitter and reflect said optical signal to said second receiver.

4. The system of Claim 2, further comprising:

an input/output interface coupled to said first fixed position node and configured to receive said adjustment signal including information regarding the geographic coordinates of said receiver.

5. A node for use in a free space optical communication network, the node comprising:

a pointing mechanism configured to adjust an azimuth angle and an elevation angle;

a first turret having an optical transmitter and an optical receiver and mounted on said pointing mechanism; and

a turret task module comprising

an acquisition module configured to command said pointing mechanism to adjust said azimuth angle and said elevation angle until a response signal from a second remote turret is received, establishing an optical communication link between said first turret and said second remote turret,

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a tracking module configured to monitor the strength of said optical communication link between said first turret and said second remote turret, and, in response to said monitoring, command said pointing mechanism to adjust said azimuth angle and said elevation angle in order to improve said optical communication link, and

a transmit power control module configured to monitor a transmit power level of said first turret and, in response to said monitoring, automatically adjust a transmit power level of said first turret.

6. The system of Claim 5, wherein said tracking module is further configured to:  
determine a first signal strength indicative of a signal transmitted from said optical transmitter of said first turret; and

compare said first signal strength to a threshold value, and, if said first signal strength is less than said threshold value, adjust said azimuth angle and said elevation angle to a historical azimuth angle and a historical elevation angle associated with a last known signal strength that exceeded said threshold value, respectively.

7. The system of Claim 5, further comprising:  
a recovery module configured to adjust said azimuth angle and said elevation angle of said first turret to a historical azimuth angle and a historical elevation angle associated with a last known signal strength that exceeded said threshold.

8. The system of Claim 5, further comprising:  
a reacquisition module configured to command said pointing mechanism to automatically adjust said azimuth angle and said elevation angle of said first turret in order to obtain an optical link between said first turret and a replacement turret placed in the same geographic position as said second remote turret.

9. A node for use in a free space optical communication network, the node comprising:

a first node head having a first optical transmitter and a first optical receiver;  
a first pointing mechanism configured to adjust a first azimuth angle and a first elevation angle of said first node head;

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a second node head having a second optical transmitter and a second optical receiver;

a second pointing mechanism configured to adjust a second azimuth angle and a second elevation angle of said second node head; and

a controller coupled to said first and second node heads and having an acquisition module configured to command said first and second pointing mechanisms to automatically adjust said first and second azimuth angles and said first and second elevation angles until a response signal from a first remote node and a second remote node are received by said first and second node heads, respectively, establishing a first and second optical communication link.

10. The node of Claim 9, said node further comprising:

a third node head having a third optical transmitter and a third optical receiver;  
a third pointing mechanism configured to adjust a third azimuth angle and a third elevation angle of said third node head; and

said acquisition module is further configured to command said third pointing mechanism to automatically adjust said third azimuth angle and said third elevation angle until a response signal from a third remote node is received, establishing a third optical communication link.

11. The node of Claim 10, said node further comprising:

a fourth node head having a fourth optical transmitter and a fourth optical receiver;

a fourth pointing mechanism configured to adjust a fourth azimuth angle and a fourth elevation angle of said fourth node head; and

said acquisition module is further configured to command said fourth pointing mechanism to automatically adjust said fourth azimuth angle and said fourth elevation angle until a response signal from a fourth remote node is received whereby establishing a fourth optical communication link.

12. A method for establishing optical links between optical transceiver nodes in a free space optical communication network including a map node having a pivotably mounted

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transmitter and receiver, and a reflect node having a mountable retro-reflector, the method comprising:

transmitting a plurality of optical signals from said transmitter of said map node towards said retro-reflector while said transmitter moves through a defined uncertainty range by iteratively adjusting an azimuth angle and an elevation angle of said transmitter;

receiving at said receiver of said map node a plurality of reflected optical signals with a plurality of signal strengths;

determining a maximum signal strength from said plurality of signal strengths;

defining an optimal azimuth angle and an optimal elevation angle as said azimuth angle and said elevation angle of said transmitter associated with said maximum signal strength;

offsetting said optimal azimuth angle and said optimal elevation angle to compensate for the defined distance between said retro reflector and a receiver mounted on said reflect node; and

adjusting said transmitter to said offset optimal azimuth angle and said offset optimal elevation angle so that said transmitter is aligned directly with said receiver mounted on said reflect node.

13. The method of Claim 12, further comprising:

aligning said map nod and said reflect node with particularity by commanding said map node to iteratively adjust said azimuth angle and said elevation angle within a defined uncertainty range until a maximum signal strength is received by said reflect node;

adjusting said azimuth angle and said elevation angle to said azimuth angle and said elevation angle associated with said maximum signal strength;

commanding said reflect node to iteratively adjust a second azimuth angle and a second elevation angle of said reflect node within a second defined uncertainty range until a second maximum signal strength is received by said map node; and

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adjusting said second azimuth angle and said second elevation angle to said second azimuth angle and said second elevation angle associated with said second maximum signal strength.

14. A method for automatically establishing an optical link between a scan node and a stare node pointed generally towards one another in a free space optical communication network, the method comprising:

transmitting from a rotatably mounted transmitter in said scan node a plurality of signals each including a current azimuth pointing angle of said transmitter, said plurality of signals are transmitted while said transmitter iteratively rotates within a defined uncertainty region such that each of said plurality of signals is transmitted at a different azimuth angle;

receiving at said stare node at least some of said plurality of signals from said transmitter;

determining a plurality of signal strengths associated with said at least some of said plurality of signals received at said stare node;

storing said azimuth pointing angle of said transmitter and an associated signal strength in a network management application (NMA) when each of said at least some of said plurality of signals is received by said stare node, wherein a plurality of azimuth pointing angles and signal strengths are stored in said NMA;

selecting a maximum signal strength from said plurality of signal strengths stored in said NMA;

defining an optimal azimuth pointing angle as said azimuth pointing angle associated with said maximum signal strength; and

moving said transmitter in said scan node to said optimal azimuth pointing angle.

15. The method of Claim 14, further including:

transmitting from said scan node a set signal;

transmitting from said stare node a second set signal, wherein when said set signal is received by said stare node and said second set signal is received by said stare node a communication link is established.

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16. A method for automatically tracking the movements of optical nodes in a free space optical communication network including first and second nodes aligned generally towards one another, the method comprising:

- (a) transmitting from said first node a first signal including a current azimuth pointing angle of said first node, a current elevation angle of said first node, and a request for said second node to measure a first signal strength of said first signal;
- (b) receiving at said second node said first signal, wherein said second node measures a first signal strength of said first signal;
- (c) transmitting from said second node a second signal including a current azimuth pointing angle of said second node, a current elevation angle of said second node, and a request for said first node to measure a second signal strength of said second signal;
- (d) receiving at said first node said second signal, wherein said first node measures a second signal strength of said second signal;
- (e) transmitting from said second node a third signal including said first signal strength of said first signal; and
- (f) transmitting from said first node a fourth signal including said second signal strength of said second signal, if said first signal strength of said first signal exceeds a first threshold value and said second signal strength of said second signal exceeds a second threshold value said method is repeated from (a).

17. The method of Claim 16, further comprising:

iteratively adjusting the current azimuth pointing angle of said first node so that said first signal strength of said first signal exceeds said first threshold value.

18. The method of Claim 17, further comprising:

iteratively adjusting the current azimuth pointing angle of said second node so that said second signal strength of said second signal exceeds said second threshold value.